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ABSTRACT

This course of study provides a framework for the content of a program in agribusiness education as part of the Alabama vocational education program. The course of study was designed to assist educators in developing and maintaining high quality vocational programs and to ensure uniformity of vocational programs. Following a description of the framework for agribusiness education, the guide lists topics and required student outcomes for core courses in the regular agribusiness program: agriscience and general shop, agribusiness science and general shop, agritechnology and agricultural mechanics, and agribusiness and agricultural mechanics. It also describes topics and student outcomes for specialized 2-year courses: horticulture/floriculture, forestry production and processing, livestock production, and agricultural construction/maintenance. Finally, the guide provides topics and student outcomes for optional courses in exploring agribusiness, exploring agribusiness and natural resources, and semester courses. A note on vocational student organizations completes the guide. (KC)

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Alabama Course of Study

AGRIBUSINESS EDUCATION

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Alabama Course of Study
AGRIBUSINESS EDUCATION

Wayne Teague
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BULLETIN 1990, NO. 60

ALABAMA COURSE OF STUDY
AGRIBUSINESS EDUCATION

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PREFACE

Federal legislation mandates that vocational education programs provide a coherent sequence of courses that include exploration of careers, understanding of basic family concepts, and preparation for employment.

Alabama Law, Act No. 84-234 in section 16-35-4 states:

> The state board of education, on the recommendations of the state superintendent, shall prescribe the minimum content of courses of study for all public, elementary and high schools in the state....

This course of study provides the framework for the content of a course and/or program in vocational education. The primary purpose of the course of study is to assist administrators and teachers in developing and maintaining high quality vocational programs that produce employable students with entry-level job competencies and students with basic family living skills. A secondary purpose is to add uniformity to vocational programs.

The core courses in this document contain student outcomes that meet the five characteristics of any course of study: basic, appropriate, reachable, reasonable, and enforceable. The outcomes dictate the content that is to be used in planning effective and comprehensive vocational programs.

The course of study is a foundation for each vocational education program. Local school systems are encouraged to add content to accommodate varying local patterns of organization, resources, and needs.

INTRODUCTION

Programs in Agribusiness Education have been in existence for more than 70 years. They have contributed extensively to the prosperity of today's increasing population.

From the beginning of this program in 1918 until the mid-1960s, the main emphasis was on production agriculture (farming). The Vocational Act of 1963, along with subsequent amendments and national studies, laid the groundwork to expand the program to include preparation for off-farm agricultural occupations in such areas as forestry, ornamental horticulture, agricultural supplies, agricultural processing, and agricultural resources.

The major purposes of Agribusiness Education today are to:

1. Provide instruction that will prepare students for entry-level competence in the occupational areas as identified by CIP Codes for Agribusiness Education.
2. Prepare students for entry into post-secondary programs in Agribusiness Education.
3. Contribute to the broad educational objectives of the public school system.
4. Develop abilities in human relations essential to successful employment.
5. Develop the abilities needed to exercise and follow effective leadership in fulfulling occupational, social, and civic responsibilities.

Schools should provide instruction within the broad field of agribusiness for all rural and urban students who are interested in and can benefit from such education. Quality programs in Agribusiness Education have the following characteristics:

1. Curriculum designed to meet students' individual needs and occupational goals.
2. Adequate and modern facilities.
3. Adequate financing.
4. Active FFA chapters to insure the development of leadership, citizenship, and cooperation.
5. Competent teachers who keep abreast of changes in agribusiness through participation in workshops.
6. School and community support.

CONCEPTUAL FRAMEWORK FOR AGRIBUSINESS EDUCATION

The purpose of the conceptual framework diagram on the following page is to present an overall view of the core and optional courses in the Agribusiness Education program. The core courses in Agribusiness Education consist of those offered in high schools and in Area Vocational Centers (AVCs).

A four-year program is designed for the regular secondary program. The core courses are Agriscience and General Shop, Agribusiness Science and General Shop, Agri-Technology and Agricultural Mechanics, and Agribusiness and Agricultural Mechanics. Because these courses are not sequential in nature, students may complete any one or all of them at a high school.

Specialized two-year courses are offered at the AVCs. Students who complete the tenth grade may enroll in courses at the AVCs without agribusiness prerequisites. Those courses are Horticulture/Floriculture, Forestry Production and Processing, Livestock Production, and Agriculture Construction/Maintenance.

The optional courses are offered in Grades seven and/or eight. These are exploratory courses and may be taught for a twelve-week, semester, or year-long term. Exploratory Agribusiness and/or Exploratory Agribusiness and Natural Resources are courses that may be offered in middle schools, junior high schools, and/or regular high schools. They are not prerequisite to any other agribusiness courses.

AGRIBUSINESS EDUCATION

Optional Courses

Grades 7-8

- Exploring Agribusiness
- Exploring Agribusiness and Natural Resources

CORE PROGRAM

OFFERED IN HIGH SCHOOLS

Grades 9-12

One-hour, One-year

- AGRISCIENCE AND GENERAL SHOP
- AGRIBUSINESS SCIENCE AND GENERAL SHOP
- AGRI-TECHNOLOGY AND AGRICULTURAL MECHANICS
- AGRIBUSINESS AND AGRICULTURAL MECHANICS

OFFERED IN AREA VOCATIONAL CENTERS

Grades 11-12

Two-hours, Two-years

- HORTICULTURE/ FLORICULTURE
- FORESTRY PRODUCTION AND PROCESSING
- LIVESTOCK PRODUCTION
- AGRICULTURAL CONSTRUCTION/ MAINTENANCE

STATEMENT OF DELIMITATIONS

This course of study is a document limited to minimum requirements and job component core courses. Requirements are expressed in terms of student outcomes. The competency-based outcomes are minimum. They may be expanded at the school or system level to meet the community needs and business and industry requirements.

The course of study is not intended to be used as a curriculum guide and does not include learning activities. Curriculum guides that include activities, teaching methods, resources, and student evaluations may be developed at the state, system, and/or school level.

While attempts were made to review current literature and research pertaining to curriculum development nationwide, student outcomes will need to be updated as new occupations and technologies emerge.

This course of study is designed to give teachers the flexibility to rearrange outcomes to meet student instructional needs. While some optional courses are indicated in the graphic section of the conceptual framework, only a brief description of each optional course is provided. Student outcomes for these optional courses are not included.

AGRIBUSINESS EDUCATION

AGRISCIENCE AND GENERAL SHOP

This course is for students who have expressed an interest in increasing their knowledge of agribusiness and/or agriculture and general shop. Students receive instruction and/or participate in hands-on activities in the areas of leadership development, plant science, control of household pests, conservation of natural resources, and general shop.

Students are expected and encouraged to develop a Supervised Agricultural Experience Program (SAEP). Students should implement many of the approved practices or skills and competencies learned and/or developed in the classroom and shop in the SAEP.

Leadership characteristics are developed through participation in student organization activities, such as public speaking and other competitive events.

Although this course stands alone (no prerequisites required) and could be used for any Grade 9 through 12, it has been planned for the ninth grade.

TOPICS	STUDENT OUTCOMES
	Students will
AGRIBUSINESS FOUNDATIONS	1. Describe the importance of agribusiness to the economy of the local area, county, state, and nation.
	2. Discuss the effect of high technology on agribusiness.
	3. Analyze problems facing agribusiness.
LEADERSHIP DEVELOPMENT	4. Develop skills that pertain to leadership, cooperation, and citizenship.
	5. Demonstrate the ability to communicate verbally.
	Example: a group discussion

AGRIBUSINESS EDUCATION

AGRISCIENCE AND GENERAL SHOP

TOPICS	STUDENT OUTCOMES
	Students will
SUPERVISED AGRICULTURAL EXPERIENCE PROGRAMS (SAEP)	6. Develop managerial skills by conducting projects and/or enterprises in an SAEP.
COMPUTER APPLICATION	7. Explain the role of computers and computer careers in agribusiness and/or agriculture.
	8. Run a basic agribusiness program applicable to the course content.
PLANT SCIENCE	9. Analyze the role of plants in the balance of the ecological system.
	10. Use proper germination techniques in producing healthy seedlings.
	11. Describe the functions of the primary nutrients and the deficiency symptoms that result in their absence.
	12. Describe the function of the secondary and trace nutrients.
	13. Interpret and apply the results of a soil test analysis report. - Fertilizer ratios - Types of fertilizer - Methods of application
CROP PRODUCTION	14. Plan a crop rotation system. - Selection of crops to grow - Selection of crop site
	15. Contrast current planting, cultivating, irrigating, and harvesting methods.

TOPICS	STUDENT OUTCOMES
	Students will
CROP PRODUCTION (continued)	16. Diagnose and control plant pest problems. - Insects - Diseases - Weeds - Environmental impact
	17. Determine the needs and values associated with planting a vegetable garden. Examples: economic feasibility, recreational value
	18. Plan a vegetable garden.
	19. Describe ways to manage a vegetable garden. - Cultivating - Fertilizing - Irrigating - Controlling pests - Harvesting
	20. Explain the advantages of organic gardening. - Organic fertilizer - Pest control
CONTROL OF HOUSEHOLD PESTS	21. Identify the effects of household pests on family health.
	22. Demonstrate how to control household pests. - Rats - Roaches - Houseflies - Ants

AGRIBUSINESS EDUCATION

AGRISCIENCE AND GENERAL SHOP

TOPICS	STUDENT OUTCOMES
	Students will
CONSERVATION OF NATURAL RESOURCES	23. Relate conservation to natural resources. - Soil - Water - Forest - Wildlife
GENERAL SHOP	24. Demonstrate the use of general safety rules to follow in the shop. - Eye- and ear-protection devices - Proper clothing - Lifting procedure - Injury reporting procedure - Fire extinguisher usage
	25. Identify, maintain, and demonstrate the proper use of hand tools.
	26. Demonstrate how to adjust and use portable power tools properly.
	27. Draw and interpret a scaled plan using drawing tools. Examples: T-square, architect's scale
	28. Estimate and calculate the cost of building materials. - Preparation of bill of materials - Calculation of board feet - Pricing of materials
	29. Demonstrate woodworking skills. Example: planning and constructing a woodworking project

TOPICS	STUDENT OUTCOMES
	Students will
GENERAL SHOP (continued)	30. Demonstrate finishing and painting skills. - Surface preparation - Selection of finishing materials - Application of finishing materials
	31. Demonstrate the proper use and maintenance of finishing tools.

AGRIBUSINESS EDUCATION

AGRIBUSINESS SCIENCE AND GENERAL SHOP

Students enrolled in this course receive instruction and also practice hands-on experiences in the areas of soil science, animal science, and general shop. As in other courses, students are expected and encouraged to develop a Supervised Agricultural Experience Program (SAEP) at home or at some other site in order to put into practice many of the skills obtained or developed in the instructional program.

Leadership characteristics are developed through participation in student organization activities.

This course stands alone (no prerequisites required), but it was planned for tenth grade students.

TOPICS	STUDENT OUTCOMES
	Students will
AGRIBUSINESS FOUNDATIONS	See pages 7-8, Outcomes 1-8.
ANIMAL SCIENCE	9. Assess the function, size, and economic importance of the livestock industry to the nation, state, and local area.
	10. Assess the function, size, and economic importance of the dairy industry to the nation, state, and local area.
	11. Assess the function, size, and economic importance of the poultry industry to the nation, state, and local area.
	12. Distinguish prominent animal breeds, giving their characteristics. - Beef cattle - Dairy cattle - Swine - Sheep

TOPICS	STUDENT OUTCOMES
ANIMAL SCIENCE (continued)	Students will 13. Compare breeding systems. Examples: artificial insemination, embryo transplant 14. Relate the importance of genetics to animal production. 15. Name, locate, and describe the functions of the parts of the digestive systems of ruminant and non-ruminant animals. 16. Develop a cost-efficient nutritional program for farm animals. - Nutrient groups - Sources of nutrients - Feed additives - Roughages - Concentrates 17. Formulate a balanced feed ration for various types and ages of livestock. 18. Plan a good health and sanitation program for farm animals. - Animal waste - Disease prevention and control - Parasite control 19. Evaluate and rank animals within a group. Examples: breeding, marketing

TOPICS	STUDENT OUTCOMES
	Students will
ANIMAL SCIENCE (continued)	20. Demonstrate an understanding of livestock marketing methods. Examples: auction, direct purchase
SOIL SCIENCE	21. Contrast the major soil areas within Alabama. - Texture and structure - Water retention - Profiles - Drainage - Formation 22. Determine crops based on soil type. 23. Interpret and apply the results of a soil test analysis report. - Fertilizer ratios - Types of fertilizers - Methods of application - Adjustment of pH level 24. Evaluate land based on the eight capability classes.
GENERAL SHOP	25. Demonstrate the use of general safety rules. - Eye- and ear-protection devices - Proper clothing - Injury reporting procedure - Fire extinguisher usage - Lifting procedure

TOPICS	STUDENT OUTCOMES
	Students will
GENERAL SHOP (continued)	26. Demonstrate the proper procedures for joining metals by arc welding. - Metal preparation - Electrode selection - Polarity setting - Amperage setting - Electrode angle - Rate of travel - Establishment of arc length - Physical position Examples: vertical, horizontal, overhead, flat
	27. Join metals by arc welding. - Butt - Corner - Fillet (T) - Lap
	28. Demonstrate the proper procedures for joining metals by shielding gas welding. Examples: MIG, TIG
	29. Demonstrate the proper procedures for using oxy-acetylene equipment. Examples: welding, cutting, heating
	30. Demonstrate proper safety procedures when working with small gasoline engines.

TOPICS	STUDENT OUTCOMES
	Students will
GENERAL SHOP (continued)	31. Differentiate between the principles of operation of small engines. - Gas - Diesel - Two-stroke - Four-stroke - LP gas
	32. Explain the systems of small gasoline engines. - Fuel system - Carburetion system - Compression system - Governing system - Ignition system
	33. Perform routine care and maintenance of small gasoline engines.
	34. Analyze and repair small gasoline engine problems.
	35. Adjust and properly use stationary power tools. Examples: planer, radial arm saw, power hacksaw, table saw, jointer

AGRIBUSINESS EDUCATION

AGRI-TECHNOLOGY AND AGRICULTURAL MECHANICS

The major areas of instruction in this course include general and ornamental horticulture/floriculture, forestry, aquaculture, and agricultural mechanics. Students are also expected and encouraged to develop Supervised Agricultural Experience Programs (SAEP) for the purpose of implementing the skills and competencies learned or developed in the classroom and shop.

As in the other courses, leadership characteristics are developed by student participation in the youth organization activities.

Although this course stands alone (no prerequisites required) and could be used anywhere in Grades 9 through 12, it was planned primarily for eleventh grade students.

TOPICS	STUDENT OUTCOMES
	Students will
AGRIBUSINESS FOUNDATIONS	See pages 7-8, Outcomes 1-8.
HORTICULTURE	9. Assess employment opportunities in horticulture. 10. Develop and understand a horticulture vocabulary. 11. Manage a greenhouse for growing healthy plants. - Controlling temperature, light, and ventilation - Controlling diseases and pests - Developing medium - Propagating and potting plants - Watering and fertilizing plants

AGRIBUSINESS EDUCATION

AGRI-TECHNOLOGY AND AGRICULTURAL MECHANICS

TOPICS	STUDENT OUTCOMES
	Students will
HORTICULTURE (continued)	12. Develop and maintain nursery field crops. - Selecting site - Setting liners - Thinning plants - Watering and/or fertilizing - Controlling pests - Digging plants - Labeling and grading plants
	13. Create a landscape design. - Business - Institution
	14. Select, plant, and maintain landscape plants.
	15. Select turf grasses and ground covers for a specific area.
	16. Establish and maintain healthy turf and ground covers.
	17. Design and establish a home orchard. - Selecting site - Selecting plants - Planting trees and/or vines
	18. Manage an established home orchard. - Pruning - Spraying - Fertilizing and mulching - Harvesting, sorting, and grading
FORESTRY	19. Explore employment opportunities in the forestry industry.

TOPICS	STUDENT OUTCOMES
	Students will
FORESTRY (continued)	20. Determine the importance and economic value of forests in Alabama.
	21. Identify important forest trees.
	22. Determine major needs in caring for forests. - Fire control - Reforestation - Cutting practices - Controlling insects and diseases - Controlling undesirable species
	23. Discuss and/or demonstrate forestry management practices. - Harvesting - Reforestation - Site preparation - Planting - Government and industry incentives
	24. Devise a marketing plan for forest products. - Assessing marketing practices - Estimating standing sawtimber or pulpwood - Measuring volumes in logs - Cruising timber - Reviewing sales agreements
AQUACULTURE	25. Explore employment opportunities in aquaculture.
	26. Identify markets for aquaculture products.

AGRIBUSINESS EDUCATION

AGRI-TECHNOLOGY AND AGRICULTURAL MECHANICS

TOPICS	STUDENT OUTCOMES
	Students will
AQUACULTURE (continued)	27. Interpret general guidelines for prevention, diagnosis, and treatment of diseases and parasites.
	28. Describe ways to control predators, trash fish, and other pests.
	29. Plan an aquaculture farm from establishment to market. - Site preparation - Water analysis - Product development - Feeding - Harvesting - Marketing
AGRICULTURAL MECHANICS	30. Discuss and apply safety procedures dealing with electricity.
	31. Design an electrical plan. - Load requirements - Local electrical codes - National electrical codes
	32. Demonstrate proficiency in wiring techniques.
	33. Demonstrate sheet metal skills. Examples: layout, marking, cutting, assembly
	34. Demonstrate concrete and masonry skills. - Building and preparing forms - Assembling reinforcements - Pouring, finishing, and curing - Laying cinder blocks

TOPICS	STUDENT OUTCOMES
AGRICULTURAL MECHANICS (continued)	Students will 35. Assemble water supply lines. - Galvanized pipe - Copper tubing - PVC pipe 36. Maintain and repair plumbing systems. Examples: leaking faucets, clogged lines 37. Design a waste disposal system to meet health department and code specifications.

AGRIBUSINESS EDUCATION

AGRIBUSINESS AND AGRICULTURAL MECHANICS

Agribusiness and Agricultural Mechanics is a course with instructional units in the areas of farm and business organization and management, marketing of farm products, personal development, human relations, employability skills, legal aspects of business decisions, and agricultural mechanics. Students are expected and encouraged to develop Supervised Agricultural Experience Programs (SAEP), so they may put into practice many of the skills obtained as a result of the instructional program.

Students develop leadership characteristics through participation in youth organization activities.

Although this course stands alone (no prerequisites required), it was planned for twelfth grade students.

TOPICS	STUDENT OUTCOMES
	Students will
AGRIBUSINESS FOUNDATIONS	See pages 7-8, Outcomes 1-8.
FARM PRODUCTS MARKETING	9. Examine the role of marketing in the farm economy and the various functions involved in the marketing process. 10. Analyze food processing and manufacturing and the role of food marketing regulations designed to protect consumers. 11. Examine factors influencing the behavior of agricultural prices. 12. Determine marketing alternatives and marketing channels for crops and livestock producers. - Domestic - International

AGRIBUSINESS AND AGRICULTURAL MECHANICS

TOPICS	STUDENT OUTCOMES
	Students will
FARM PRODUCTS MARKETING (continued)	13. Examine risk management strategies commonly used by farmers in marketing farm products. Examples: cash contract, future contract
FARM AND/OR BUSINESS MANAGEMENT	14. Analyze types of agricultural business organizations. - Proprietorship - Partnership - Cooperative - Corporation
	15. Describe the principles of entrepreneurship.
	16. Relate the importance of entrepreneurship to the economic system of the United States.
	17. Examine the basic characteristics of contracts.
	18. Describe the business skills needed to operate a small business efficiently and effectively.
	19. Analyze the use of credit in the farm business.
	20. Compare and contrast loan interest rates and repayment terms.
	21. Examine the classification and description of property.
	22. Examine the valuation and acquisition of property.
RIBUSINESS SALES	23. Examine a salesperson's role in agribusiness and/or society.

TOPICS	STUDENT OUTCOMES
	Students will
AGRIBUSINESS SALES (continued)	24. Compare and contrast the effects of mental attitude on agribusiness sales. Examples: power of positive thinking, self image, poor mental attitude, fear of failure
	25. Discuss reasons people purchase products. - Buying impulses - Emotional needs - Essential needs
	26. Analyze selling patterns. - Approach - Presentation - Close
	27. Examine the need for proper appearance and sales etiquette.
	28. Demonstrate the art of handling rebuttals.
AGRICULTURAL SURVEYING	29. Demonstrate the procedures used in differential and profile leveling. - Setting up instruments - Recording field notes - Calculating elevation - Executing return checks Examples: math, closure
	30. Demonstrate the procedure for laying out a building foundation.
ELECTRIC MOTORS AND CONTROLS	31. Identify parts of electric motors and determine their functions.

TOPICS	STUDENT OUTCOMES
	Students will
ELECTRIC MOTORS AND CONTROLS (continued)	32. Analyze the basic types of electric motors. Examples: split phase, capacitor
	33. Interpret name-plate information.
	34. Demonstrate the procedure for reversing direction of rotation and voltage of electric motors.
	35. Determine the appropriate motor for specific applications.
	36. Demonstrate skills in maintenance and repair of electric motors. Examples: cleaning, lubricating
	37. Determine the appropriate motor controls for agricultural applications. Examples: heating, ventilating, lighting
BUILDING CONSTRUCTION	38. Demonstrate skills in the use of building construction tools. Examples: framing square, circular saw
	39. Prepare rafters for installation. - Types - Layout - Cut

TOPICS	STUDENT OUTCOMES
	Students will
BUILDING CONSTRUCTION (continued)	40. Analyze commonly used building materials to determine their suitability for specific applications.
	41. Examine different building construction components to determine their suitability for specific applications. Examples: foundations, walls
	42. Calculate construction cost of buildings.
	43. Demonstrate skills in actual construction of buildings.
TOOL FITTING	44. Demonstrate skills in repairing and reconditioning tools. Examples: sharpen, replace handles
	45. Apply tool-sharpening skills. - Examining tools - Determining the design of the cutting edges - Sharpening
PAINTING	46. Prepare wood and metal for painting.
	47. Select and apply painting materials.

TOPICS	STUDENT OUTCOMES
	Students will
TRACTOR AND MACHINERY MAINTENANCE	48. Demonstrate how to service tractors. - Storage battery - Cooling system - Fuel system - Ignition system - Lubrication system - Wheel bearings - Hydraulic system
	49. Service, adjust, and repair agricultural machinery. Examples: baler, combine, spray equipment

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

This is a two-year course that offers units of instruction in the developing of skills, competencies, and understandings needed for successful employment or establishment in production, management, and sales and service aspects in the ornamental horticulture/floriculture enterprises. The course may include instruction in greenhouse, nursery, or garden center management; or it may provide for specialization in plant growth, propagation, landscaping, and turf establishment and maintenance. Floriculture deals with flower production, floral design, management, and sales and/or services in a floral shop.

Students are expected and encouraged to develop Supervised Agricultural Experience Programs (SAEP), so they may put into practice many of the skills and competencies obtained as a result of the instructional program.

Students develop leadership characteristics through participation in youth organization activities.

TOPICS	STUDENT OUTCOMES
	Students will
HORTICULTURE/ FLORICULTURE IN A CHANGING WORLD	1. Discuss the importance of the horticulture/floriculture industry to the economy of the local area, county, state, nation, and world.
	2. Describe how high technology has affected horticulture/ floriculture.
	3. Analyze problems facing the horticulture/floriculture industry.
LEADERSHIP DEVELOPMENT	4. Develop personal skills that pertain to leadership, cooperation, and citizenship.
	Example: use of parliamentary procedure to conduct meetings

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
LEADERSHIP DEVELOPMENT (continued)	5. Demonstrate the ability to communicate verbally. Example: preparation and deliverance of a short speech
SUPERVISED AGRICULTURAL EXPERIENCE PROGRAM (SAEP)	6. Develop managerial skills by conducting supervised agricultural experience programs pertaining to horticulture/floriculture.
COMPUTER APPLICATION	7. Explain the role of computers and computer careers in horticulture/floriculture. 8. Run basic computer horticulture/floriculture programs.
BASIC PLANT SCIENCE	9. Analyze the role of plants in the balance of the ecological system. 10. Produce a healthy seedling through proper germination techniques. 11. Analyze the effects of each environmental factor on plant growth. 12. Describe the function of primary nutrients and the symptoms of their deficiencies. - Nitrogen - Phosphorus - Potassium 13. Describe the function of the secondary and trace nutrients.

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
BASIC PLANT SCIENCE (continued)	14. Interpret and apply the results of a soil test analysis report. - Soil-testing procedures - Fertilizer ratios - Types of fertilizers - Methods of application
PLANT PROPAGATION	15. Construct and equip propagation structures.
	16. Develop managerial skills pertaining to the successful operation of a plant propagation enterprise. - Choice of propagation media - Method(s) of propagation - Accurate propagation records - Environmental methods control
	17. Demonstrate the ability to propagate plants by various methods. - Stem cuttings - Leaf bud cuttings - Seeds - Budding - Grafting - Layering - Division - Separation - Root cuttings
SOILS AND MEDIA MIXTURES	18. Differentiate among the types of soils.
	19. Adjust soil conditions by the addition of soil additives.

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
SOILS AND MEDIA MIXTURES (continued)	20. Prepare media mixtures for containers and beds. - Soil mixtures - Mixtures without soil - Sterilization or fumigation
	21. Determine and adjust the soil or media pH.
PLANT IDENTIFICATION	22. Identify horticulture plants by common name.
GREENHOUSE CROP PRODUCTION	23. Control environmental conditions for proper plant growth. Examples: light, temperature, water
	24. Produce and market greenhouse crops. - Cutting flowers - Potting plants Examples: flowering, foliage
	25. Diagnose and control plant problems. - Insects - Diseases - Weeds
	26. Select the method for watering greenhouse plants. Examples: hand, chapin, perimeter
	27. Select the type of fertilizer and method of application for fertilizing greenhouse plants. Examples: water soluble fertilizer, proportioner

TOPICS	STUDENT OUTCOMES
	Students will
GREENHOUSE CROP PRODUCTION (continued)	28. Construct specialty items using plants in the greenhouse. Examples: hanging baskets, dish gardens, floor planters, terrariums
NURSERY CROP PRODUCTION	29. Select the type of fertilizer and method of application for fertilizing nursery crops. - Field-grown crops - Container-grown crops
	30. Select the method for watering nursery crops. - Field-grown crops - Container-grown crops
	31. Diagnose and control nursery crop pests. - Weeds - Insects - Diseases
	32. Produce nursery crops in a field and in containers. - Liner preparation - Crop maintenance Examples: fertilize, irrigate, thin, prune, control pests
	33. Harvest field-grown crops. Examples: hand or mechanical digging, ball-and-burlap, bare-root

TOPICS	STUDENT OUTCOMES
	Students will
NURSERY CROP PRODUCTION (continued)	34. Demonstrate the ability to care for harvested bare-root nursery plants. - Labeling and grading - Heeling-in - Bagging
	35. Process and ship nursery orders.
VEGETABLE GARDENING	36. Determine the needs and values of a vegetable garden. Examples: economic feasibility, recreational values
	37. Plan and plant a vegetable garden.
	38. Describe ways to manage a vegetable garden. - Cultivating - Fertilizing - Irrigating - Controlling pests - Harvesting
	39. Diagnose and control plant pest problems. - Insects - Diseases - Weeds - Impact on environment
	40. Explain the advantages of organic gardening. - Organic fertilizer - Pest control

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
FRUIT AND NUT PRODUCTION	41. Determine the needs and values of orchards. Examples: economic feasibility, recreational values
	42. Plan, layout, and plant orchards.
	43. Describe ways to manage orchards. - Fertilizing - Irrigating - Controlling pests - Pruning - Harvesting - Storing
	44. Diagnose and control orchard pest problems. - Insects - Diseases - Weeds - Impact on environment
PLANT PEST CONTROL	45. Apply pesticides to ornamental plants. - Identifying pests - Selecting pesticides - Reading and following labels - Selecting methods of application - Practicing safety procedures
	46. Specify the proper way(s) to label, store, and dispose of pesticides and empty containers.

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
PLANT PEST CONTROL (continued)	47. Demonstrate the proper way to clean and store pesticide application equipment.
LANDSCAPE DESIGN, ESTABLISHMENT, AND MAINTENANCE	48. Develop landscaping skills. - Landscape design - Site preparation - Layout
	49. Demonstrate the correct way to plant landscape plants. Examples: shrubs, trees, vines, ground covers, herbaceous plants
	50. Maintain an established landscape planting. - Fertilizing - Watering - Pruning - Winterizing - Mulching
	51. Diagnose and control landscape plant problems. - Weeds - Diseases - Insects
TURF AND LAWN ESTABLISHMENT AND MAINTENANCE	52. Establish a lawn and turf area. - Selecting types of grasses and/or ground covers - Preparing soil - Selecting method of establishing a lawn
	53. Maintain an established lawn and turf area.

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
TURF AND LAWN ESTABLISHMENT AND MAINTENANCE (continued)	54. Diagnose and control turf and lawn problems. - Weeds - Diseases - Insects
FLORAL DESIGN	55 Design funeral tributes. Examples: standing spray, casket cover
	56. Demonstrate the ability to condition, store, and handle cut flowers and greenery.
	57. Construct boutonnieres and corsages.
	58. Demonstrate the ability to wrap flowering pot-plants.
	59. Design a bud vase arrangement.
	60. Demonstrate the basic line designs of floral arrangements. Examples: symmetrical, asymmetrical
	61. Demonstrate the ability to inventory plants, arrangements, and supplies.
	62. Demonstrate the ability to tint floral products. Examples: spray-tint flowers, dip-dye flowers

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
	Students will
HORTICULTURE/ FLORICULTURE BUSINESS MANAGEMENT	63. Prepare plants and merchandise for marketing. - Formulating price - Labeling plants and merchandise - Pricing plants and merchandise - Displaying plants and merchandise
	64. Demonstrate managerial skills in successfully operating a horticulture business. - Scheduling work - Estimating job costs - Handling customer complaints - Keeping records and accounts - Inventorying and ordering - Advertising
	65. Conduct sales transactions. - Cash register, calculator, billing machine, and charge-card equipment operation - Salesmanship - Telephone orders - Floor sales
SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES	66. Construct horticulture and/or floriculture facilities. Examples: greenhouse, hotbed, cold frame, lathhouse

AGRIBUSINESS EDUCATION

HORTICULTURE/FLORICULTURE

TOPICS	STUDENT OUTCOMES
SERVICING AND MAINTAINING EQUIPMENT AND FACILITIES (continued)	Students will 67. Perform maintenance jobs on horticulture and/or floriculture facilities. Examples: painting, electrical repairs, glazing, plumbing, carpentry 68. Maintain hand tools. Examples: clean, repair, sharpen 69. Demonstrate the ability to service small gasoline engines. Examples: change oil, change spark plugs

AGRIBUSINESS EDUCATION

FORESTRY PRODUCTION AND PROCESSING

This two-year course is designed primarily to enable students to develop understandings, skills, and competencies essential for success in forestry production and processing either as owner-operators or as wage earners. The course includes instruction in the areas of basic forestry, applied silviculture, forest measurements, forest products, reforestation, and others.

Students are expected and encouraged to develop Supervised Agricultural Experience Programs (SAEP), so they may put into practice many of the skills and competencies obtained as a result of the instructional program.

Students develop leadership characteristics through participation in youth organization activities.

TOPICS	STUDENT OUTCOMES
	Students will
FORESTRY IN A CHANGING WORLD	1. Describe the importance of forestry to the economy of the local area, county, state, and nation.
	2. Discuss the effect of high technology on forestry.
	3. Explain how forests are related to other natural resources.
	4. Discuss the present condition of forests in Alabama.
LEADERSHIP DEVELOPMENT	5. Develop personal skills that pertain to leadership, cooperation, and citizenship.
	Example: use of parliamentary procedure to conduct meetings

AGRIBUSINESS EDUCATION

FORESTRY PRODUCTION AND PROCESSING

TOPICS	STUDENT OUTCOMES
	Students will
LEADERSHIP DEVELOPMENT (continued)	6. Demonstrate the ability to communicate verbally. Example: preparation and deliverance of a short speech
SUPERVISED AGRICULTURAL EXPERIENCE PROGRAMS (SAEP)	7. Develop managerial skills by conducting projects and/or enterprises in an SAEP.
COMPUTER APPLICATION	8. Explain the role of computers and computer careers in forestry. 9. Run basic computer forestry programs.
SILVICULTURAL PRACTICES	10. Define the term "intermediate cutting." 11. Discuss the purposes of thinning. 12. Demonstrate methods of thinning a stand of timber. 13. Recognize symptoms of overcrowded timber stands. 14. Perform cleaning operations. - Prescribe burning - Cutting - Basal spraying - Foliage spraying - Soil sterilants 15. Perform liberation operations. - Girdling - Basal spraying - Cutting

AGRIBUSINESS EDUCATION

FORESTRY PRODUCTION AND PROCESSING

TOPICS	STUDENT OUTCOMES
	Students will
SILVICULTURAL PRACTICES (continued)	16. Demonstrate improvement cuttings. - Sanitation cuttings - Salvage cuttings - Pruning
	17. Perform harvest cuttings. - Intermediate - Clear - Seed tree - Shelterwood - Selection
ARTIFICIAL REFORESTATION	18. Determine the number of seedlings needed to plant an acre based on various spacings.
	19. Determine areas best suited for forest crops.
	20. Demonstrate ways to care for seedlings upon receipt from nursery.
	21. Demonstrate different methods of site preparation prior to planting.
	22. Demonstrate methods of planting seedlings. - Hand - Machine
	23. Maintain a forestry plot following its establishment.
FOREST PROTECTION	24. Describe types of forest fires.
	25. Explain the effects of topography, weather, and vegetation on the behavior of forest fires.
	26. Describe proper methods of forest fire protection and suppression.

AGRIBUSINESS EDUCATION

FORESTRY PRODUCTION AND PROCESSING

TOPICS	STUDENT OUTCOMES
	Students will
FOREST PROTECTION (continued)	27. Identify and demonstrate the use of fire-fighting equipment.
	28. Identify major insects that damage forest trees in Alabama.
	29. Explain and demonstrate control measures for forest insects.
	30. Identify and describe forest tree diseases and their control.
	31. Describe causes and effects of injury to forest trees. - Insects - Animals - Weather - Diseases - Fire
	32. Determine when hardwoods are undesirable and subject to eradication.
	33. Control undesirable trees and herbaceous weeds by using different methods and materials.
FOREST MEASUREMENTS	34. Locate tract of land by map and legal description.
	35. Determine measurements with surveyor's chain and by pacing.
	36. Determine direction by using a compass.
	37. Locate boundaries of a timber tract from legal descriptions.
	38. Determine number of acres in a timber tract.
	39. Estimate standing tree height by using a tree scale stick.

AGRIBUSINESS EDUCATION

FORESTRY PRODUCTION AND PROCESSING

TOPICS	STUDENT OUTCOMES
	Students will
FOREST MEASUREMENTS (continued)	40. Estimate standing tree diameter at breast height (DBH). - Tree-scale stick - Diameter tape
	41. Determine volumes of forest products. Examples: sawlogs, pulpwood
	42. Determine site index of a tract of standing timber.
	43. Estimate volume of standing timber by cruising.
	44. Estimate volume of felled timber by scaling.
	45. Measure growth and determine age of trees using an increment borer.
FOREST TREE IDENTIFICATION	46. Explain the difference between hardwoods and softwoods.
	47. Identify important trees of the forest.
FOREST PRODUCTS	48. Select marketable trees for most profitable use. Examples: lumber, pulpwood, posts, poles, pilings
	49. Describe secondary forestry products and their uses. Examples: laminated timbers, composition board, naval stores
	50. Explain the classification and grading systems of lumber.

TOPICS	STUDENT OUTCOMES
	Students will
FOREST PRODUCTS (continued)	51. Select lumber based on bending characteristics.
	52. Classify wood products. - Grain and texture - Hardwood and/or softwood - Structural composition - Chemical composition - Wood pores
	53. Identify species of trees most commonly used as Christmas trees.
	54. Shape, shear, prune, and basal scar Christmas trees.
	55. Grade Christmas trees.
	56. Identify types of wood preservatives and their uses.
	57. Prepare timber for proper preservative treatment.
	58. Apply wood preservatives. - Pressure treatment - Cold soaking
TIMBER HARVESTING AND MARKETING	59. Discuss safety precautions to follow when harvesting timber.
	60. Develop a timber-harvest plan.
	61. Select and mark trees to be felled.
	62. Complete a bid form for purchase or sale of stumpage.
	63. Complete a forest-products sales agreement.

AGRIBUSINESS EDUCATION

FORESTRY PRODUCTION AND PROCESSING

TOPICS	STUDENT OUTCOMES
	Students will
TIMBER HARVESTING AND MARKETING (continued)	64. Demonstrate harvesting skills. - Felling - Bucking - Skidding - Loading - Hauling - Whole-tree harvesting
	65. Demonstrate the use of power equipment. Examples: skidder, knuckle-boom loader
	66. Demonstrate ways to adjust, operate, and maintain a chain saw.
	67. Demonstrate ways to record incoming and outgoing logs or timber on a tally sheet.
	68. Describe the function of sawmill power equipment. - Carriage - Circular saw - Log conveyor - Quad saw - Debarker - Cut-off saw - Stacker - Resaw trimmer-mill - Planer
	69. Describe how to protect and avoid damage to timber not marked for cutting.
	70. Identify available markets for forestry products.
	71. Explain the importance of good marketing practices.

TOPICS	STUDENT OUTCOMES
	Students will
TIMBER HARVESTING AND MARKETING (continued)	72. Identify sources of professional help in marketing forest products.
MANAGEMENT, ECONOMICS, AND BUSINESS METHODS	73. Prepare a forest management plan.
	74. Manage forests for multiple uses. - Timber - Wildlife - Recreation - Aesthetics
	75. Design, construct, and maintain roads, fire lanes, and waterbars.
	76. Utilize soil and water conservation practices on forest land.
	77. Formulate a marketing plan for Christmas trees.
	78. Calculate taxes on timber land.
	79. Develop and implement a record-keeping system.
	80. Appraise the value of standing timber.
	81. Estimate the costs and returns from growing pines.

AGRIBUSINESS EDUCATION

LIVESTOCK PRODUCTION

This course is designed for students to learn the principles and practices involved in the production of livestock. Units of instruction include breeding, feeding, care, housing, and marketing livestock. In this two-year course, students are expected and encouraged to develop Supervised Agricultural Experience Programs (SAEP), so they may put into practice many of the skills and competencies obtained as a result of the instructional program.

Students develop leadership characteristics through participation in youth organization activities.

TOPICS	STUDENT OUTCOMES
	Students will
LIVESTOCK PRODUCTION IN A CHANGING WORLD	1. Describe the importance of livestock to the economy of the local area, county, state, nation, and world.
	2. Discuss the effect of high technology on livestock production.
	3. Analyze problems facing livestock production.
LEADERSHIP DEVELOPMENT	4. Develop personal skills that pertain to leadership, cooperation, and citizenship. Example: use of parliamentary procedure to conduct meetings
	5. Demonstrate the ability to communicate verbally. Example: preparation and deliverance of a short speech
SUPERVISED AGRICULTURAL EXPERIENCE PROGRAMS (SAEP)	6. Develop managerial skills by conducting projects and/or enterprises in an SAEP.

AGRIBUSINESS EDUCATION

LIVESTOCK PRODUCTION

TOPICS	STUDENT OUTCOMES
	Students will
COMPUTER APPLICATION	7. Explain the role of computer and computer careers in livestock production.
	8. Run basic computer livestock production programs.
BEEF CATTLE PRODUCTION	9. Demonstrate managerial skills in the care and handling of beef cattle. Examples: dehorn, castrate, tag
	10. Control diseases, parasites, and other disorders of beef cattle. Examples: administering medications, treating for disorders, vaccinating
	11. Formulate a balanced feed ration.
	12. Explain how to creep feed calves.
	13. Calculate the cost of feed for various cattle operations.
	14. Determine the acres of pasture for a beef cattle operation.
	15. Implant feeder steers with growth stimulants.
	16. Explain the procedure of livestock breeding by artificial insemination.
	17. Explain the embryo transplant method of breeding.

AGRIBUSINESS EDUCATION

LIVESTOCK PRODUCTION

TOPICS	STUDENT OUTCOMES
	Students will
BEEF CATTLE PRODUCTION (continued)	18. Discuss the different breeding systems. Example: purebred
	19. Plan for producing, harvesting, and storing crops for beef cattle consumption. - Preparing a seed bed - Planting grain and forage crops - Controlling weeds, insects, and other pests - Cultivating crops using various types of equipment - Harvesting and storing grain and forage crops
SWINE PRODUCTION	20. Demonstrate skills in the care and handling of swine at farrowing. Examples: cleaning, clipping tails and teeth, castrating, ear notching
	21. Apply recommended swine sanitation practices.
	22. Control diseases, parasites, and other disorders of swine. Examples: administering medications, treating disorders, vaccinating
	23. Prepare a breeding program for swine. Examples: determining time to breed, selecting breeding stock

AGRIBUSINESS EDUCATION

LIVESTOCK PRODUCTION

TOPICS	STUDENT OUTCOMES
	Students will
SWINE PRODUCTION (continued)	24. Formulate a balanced feed ration.
	25. Calculate costs of different rations.
	26. Maintain hog feeding records and determine feeding efficiency.
SHEEP PRODUCTION	27. Describe and/or demonstrate managerial skills in care and handling of sheep. Examples: weigh, tag, shear
	28. Develop a control program for internal and external parasites.
	29. Demonstrate methods of castrating and docking sheep. Examples: knife, emasculator
GROOMING AND SHOWING LIVESTOCK	30. Demonstrate how to groom and show livestock. Examples: clipping, washing, training to lead
MARKETING LIVESTOCK	31. Demonstrate the ability to cull and select livestock for market.
	32. Investigate different marketing systems.
	33. Plan marketing schedules.
	34. Prepare marketing records.
	35. Demonstrate skills in transporting livestock.

AGRIBUSINESS EDUCATION

LIVESTOCK PRODUCTION

TOPICS	STUDENT OUTCOMES
	Students will
LIVESTOCK FACILITIES	36. Construct and maintain livestock buildings, equipment, and structures. Examples: fences, feeders, waterers
RECORDKEEPING	37. Keep accurate records. Examples: spreadsheet, ledger, pegboard accounting
SERVICING AND OPERATING FARM EQUIPMENT	38. Perform mechanical operations on farm equipment and machinery. Examples: lubrication, attachment of equipment, routine maintenance
ENVIRONMENTAL SAFETY	39. Demonstrate ways to maintain a safe environment. - Disposing of unused chemicals - Extinguishing fires - Keeping record of accidents - Ventilating work areas - Inspecting for safety hazards - Storing chemicals, inflammable materials, and medications

AGRIBUSINESS EDUCATION

AGRICULTURAL CONSTRUCTION/MAINTENANCE

This is a two-year course that enables students to develop or obtain knowledge and understanding of the principles and concepts essential for the construction and maintenance of farm/agricultural buildings and facilities. Students develop mental and manipulative skills necessary for the application of these principles.

Students are expected and encouraged to develop Supervised Agricultural Experience Programs (SAEP), so they may put into practice many of the skills and competencies obtained as a result of the instructional program.

Students develop leadership characteristics through participation in youth organization activities.

TOPICS	STUDENT OUTCOMES
	Students will
AGRICULTURAL CONSTRUCTION IN A CHANGING WORLD	1. Describe the importance of agricultural construction to the economy of the local area, county, state, nation, and world.
	2. Discuss the effect of high technology on agricultural construction.
	3. Analyze problems facing agricultural construction.
LEADERSHIP DEVELOPMENT	4. Develop personal skills that pertain to leadership, cooperation, and citizenship. Example: use of parliamentary procedure to conduct meetings
	5. Demonstrate the ability to communicate verbally. Example: preparation and deliverance of a short speech

AGRICULTURAL CONSTRUCTION AND MAINTENANCE

TOPICS	STUDENT OUTCOMES
	Students will
SUPERVISED AGRICULTURAL EXPERIENCE PROGRAMS (SAEP)	6. Develop managerial skills by conducting projects and/or enterprises in an SAEP.
COMPUTER APPLICATION	7. Explain the role of computers and computer careers in agricultural construction and maintenance.
	8. Run basic computer agricultural construction and maintenance programs.
POWER TOOLS AND EQUIPMENT	9. Adjust and operate power tools. Examples: table saw, jointer, planer, drill press
HAND TOOLS	10. Identify and use hand tools. Examples: layout tools, edge-cutting tools, teeth-cutting tools
BUILDING SITE PREPARATION	11. Lay out a building site according to architectural drawings.
BLUEPRINT READING	12. Interpret building codes and specifications.
CALCULATING AND ORDERING MATERIALS	13. Select, compute, and estimate cost of materials.
MASONRY CONSTRUCTION	14. Explain the process of mixing, pouring, and finishing concrete.
	15. Estimate quantity of block and brick masonry units for a job.
	16. Hand-cut and/or saw masonry units.

AGRIBUSINESS EDUCATION

AGRICULTURAL CONSTRUCTION AND MAINTENANCE

TOPICS	STUDENT OUTCOMES
	Students will
MASONRY CONSTRUCTION (continued)	17. Join units of stone, concrete, clay, and similar materials with mortar.
	18. Construct a foundation wall.
FLOOR AND WALL FRAMING	19. Lay out, frame, and install a built-up sill.
	20. Lay out and assemble a wall frame.
	21. Construct rough openings for doors and windows.
ROOFING AND CEILING	22. Design and construct roof and ceiling systems. Examples: trusses, joists, rafters
	23. Select and calculate the cost of decking and roofing materials.
	24. Install decking and cover roof.
STAIR AND STEP CONSTRUCTION	25. Lay out and cut stair and step stringers.
	26. Install risers, treads, and rails.
ELECTRICAL WIRING	27. Identify electrical terms and symbols for wiring plans.
	28. Locate and install light fixtures.
	29. Install a service-entrance main panel.
	30. Install circuits and attach wiring devices.

AGRIBUSINESS EDUCATION

AGRICULTURAL CONSTRUCTION AND MAINTENANCE

TOPICS	STUDENT OUTCOMES
	Students will
ELECTRICAL WIRING (continued)	31. Demonstrate the ability to follow electrical safety codes.
PLUMBING INSTALLATION	32. Plan and install a plumbing system.
INSULATION OF STRUCTURES	33. Select and install insulation. Examples: batts, rolls
EXTERIOR AND INTERIOR FINISHING	34. Install exterior doors and windows. 35. Install garage doors. 36. Install exterior trim. 37. Cut and install solid wood paneling. 38. Demonstrate finishing carpentry skills. Examples: hanging doors, applying wall coverings
LAMINATES	39. Apply laminated plastics to counter and table tops.
FINISHING SURFACES	40. Sand and clean surfaces. 41. Select and apply wood finishes. Examples: paint, stains

OPTIONAL COURSES

EXPLORING AGRIBUSINESS (Grade 7)

This is an exploratory course with units of instruction pertaining to the industry of agriculture/agribusiness and career guidance together with some basic shop/laboratory skills.

Students are expected to develop Supervised Agricultural Experience Programs (SAEP), sometimes referred to as home projects, although they may be small in scope. Students are encouraged to become FFA members and begin developing leadership skills through FFA activities.

EXPLORING AGRIBUSINESS AND NATURAL RESOURCES (Grade 8)

This is a complementary, exploratory-type course. Instruction is given in areas such as career guidance, basic animal and plant science, natural resources, and basic shop/laboratory skills.

Students are encouraged to develop Supervised Agricultural Experience Programs (SAEP) and to participate in leadership (FFA) activities.

SEMESTER COURSES

Where the need is justified and scheduling will permit, semester courses may be offered. These courses would be available for students who have expressed a desire to enroll in an agribusiness course but for some reason(s) have not previously enrolled in the program. Some examples of semester courses are listed below.

HOME LANDSCAPING AND GREENHOUSE MANAGEMENT: The planning and maintenance of home and public grounds, the operation of commercial and hobby greenhouses, related careers.

AGRIBUSINESS COMPUTER TECHNOLOGY: Basic computer literacy, computerized recordkeeping, business ownership and management, related careers.

HOME MAINTENANCE AND CONSTRUCTION SKILLS: Basic skills in electricity, plumbing, and masonry; principles of small building construction; safety; related careers.

BASIC WOODWORKING: Use of woodworking tools and equipment, wood technology, safety, related careers.

SMALL FARM AND BUSINESS VENTURES: Small farming enterprises; survey of blueberry, catfish, Christmas tree production; survey of garden center operations; survey of related agribusinesses; business ownership and management; related careers.

ANIMAL CARE AND TECHNOLOGY: Value and use of farm and companion animals, basic nutrition and reproduction, basic health care skills, related careers.

VOCATIONAL STUDENT ORGANIZATIONS

Vocational Student Organizations (VSOs) provide a unique instructional method for attaining the student outcomes identified in each vocational program. The VSO activities are considered part of the instructional day as they are directly related to the competencies, goals, and objectives of the program.

Participation in any VSO provides students with various opportunities to:

Develop leadership skills.
Enhance vocational preparation.
Work together as a team.
Become productive citizens in a democracy.
Strengthen critical-thinking skills.
Facilitate and encourage personal development.
Develop human relations skills.
Gain recognition for accomplishments.
Develop decision-making skills.
Foster a respect for the dignity of work.
Develop skills for family and community living.

A Vocational Student Organization (VSO) is an integral part of each program area's curriculum. The following VSOs are approved by the Alabama Board of Education:

National FFA Organization (FFA)
Distributive Education Clubs of America (DECA)
Future Business Leaders of America (FBLA)
Health Occupations Students of America (HOSA)
Future Homemakers of America/Home Economics Related Occupations (FHA/HERO)
Technology Student Association (TSA)
Vocational Industrial Clubs of America (VICA)

All local VSOs are affiliated with the state and national associations and are supported by membership dues and fund-raising efforts. Any student currently or previously enrolled in an Agribusiness Education course or program is eligible for membership in the vocational student organization associated with that program.